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**NAVY PUBLIC WORKS CENTER
NORFOLK, VIRGINIA
UTILITIES DEPARTMENT**

STANDARD OPERATING PROCEDURE / JOB HAZARD ANALYSIS

**TITLE
BATTERY BANK MAINTENANCE**

**PROCEDURE NUMBER
622.1 HVE 001**

THIS SOP REPLACES SOP WC622 HVE 001

SIGNED: _____
(DATE)

APPROVED: _____
(DATE)

SAFETY PROFESSIONAL: _____
(DATE)

MANAGEMENT OFFICIAL: _____
(DATE)

DATE: _____ **REVISION DATE: _____**

BATTERY BANK MAINTENANCE

Purpose:

Procedure to perform preventative maintenance on a battery bank.

Potential Energy Sources:

1. 125/48/24 DC volt battery system.

Tools and PPE:

Tools: Hydrometer, voltmeter, distilled water, corrosion preventive **B** compound, baking soda, small hand tools, and rags. PPE: Goggles, face shield, acid resistant rubber gloves and apron, and safety shoes.

References:

1. PWC Occupational Safety and Health Program Manual, PWCNORVAINST 5100.33E
2. Occupational Safety and Health Standards for General Industry (29 CFR PART 1910): Subpart I, Personnel Protective Equipment: Subpart N, Materials Handling and Storage - 1910.178(g)

Procedures:

1. Locate battery room/area vent fan control switch and manually operate the switch to check fan operation. If fan does not operate refer to SOP WC 622 HVE 004, Test and Troubleshoot Electric Motor Drives.
2. Using a properly rated voltmeter, measure the battery bank voltage. Record reading on station battery card and PM sheet. Avoid contact with energized parts.
3. Using a properly rated voltmeter, measure the pilot cell's voltage. Record reading on station battery card and PM sheet. Avoid contact with energized parts.
4. Carefully remove cap from pilot cell and, using a hydrometer, measure the unit's specific gravity. Note the temperature of the pilot cell. Record all readings on station battery card and PM sheet. Wear listed PPE and avoid contact with energized parts.

BATTERY BANK MAINTENANCE

5. Visually inspect all cells, rack, and floor area. Check for case damage, connection corrosion, loose connections, leaks, and cell water levels. Note for

replacement any damaged cells, dress and coat with corrosion preventive compound all corroded connections, tighten loose connections, clean up any leaked battery fluid, and use refill bottle to add water to cells which require it. The water level should be between the indicating lines on the cell or, if the lines are not present, just above the plates. Wear listed PPE and avoid contact with energized parts.

6. Note and record on the battery card and PM sheet the battery charger's voltmeter and ammeter readings. Using a properly rated voltmeter measure the charger's AC input voltage and the DC output voltage. Avoid contact with energized parts.

7. Inspect the battery charger for any damage and clean the air vents if necessary. Avoid contact with energized parts.